

Coliao W3230

Coliao W3230 Digital Temperature Controller User Manual

Model: W3230 | Brand: Coliao

INTRODUCTION

The Coliao W3230 Digital LED Temperature Controller Module is a high-precision device designed for temperature control in various applications. It features a clear digital LED display for enhanced readability and offers both heating and cooling control modes. This module is equipped with a waterproof NTC10K probe for accurate temperature measurement. Key features include a wide temperature measuring range of -50°C to 120°C, high control precision of 0.1°C, and the ability to save all parameter settings after a short circuit. It utilizes a relay output for control and is suitable for use in domestic freezers, water tanks, refrigerators, industrial chillers, steamers, and other temperature-controlled systems.



Figure 1: Two Coliao W3230 Digital Temperature Controllers. Each unit features a digital LED display, control buttons (SET, Up, Down), and a wired waterproof probe for temperature sensing.

SETUP AND WIRING

Before connecting the W3230 temperature controller, ensure the power supply is disconnected. The module supports DC 12V, DC 24V, or AC 110V~220V power inputs. The NTC10K waterproof sensor has a 1-meter wire. The relay output has a contact capacity of 10A 220V / 20A 12V / 20A 24V.

Refer to the wiring diagram below for proper connection. Connect the power supply to the +VCC and -GND terminals. The load (heating or cooling device) should be connected to the S1 and S2 relay output terminals.



Figure 2: Detailed wiring diagram for the W3230 controller. It illustrates connections for the power supply (+VCC, -GND) and the load (S1, S2) to the relay output.

Important: Ensure the working power supply voltage matches the label on the product.

OPERATING INSTRUCTIONS

The W3230 controller features a clear LED display with two digital tubes: PV (red) and SV (blue). The PV digital tube displays the actual measured temperature, while the SV digital tube displays the set temperature value for relay activation.

Indicator Status

- **Flashing:** Indicates cooling or heating start-up delay.
- **Constant Light:** Indicates the relay is closed (active).
- **No Light:** Indicates the relay is disconnected (inactive).
- If the delay timer is active, the light blinks during the delay, and the relay remains disconnected.

Digital Tube Display

- **PV (Red Display):** Shows the actual test temperature. Displays error codes like "LLL" (sensor open), "HHH" (measured temperature exceeds max range, relay disconnected), or "----" (high-temperature alarm setting exceeds max value).
- **SV (Blue Display):** Shows the temperature value at which the relay turns on or off. Press the **SET** button to make the SV digital tube flash, then use the **Up (▲)** and **Down (▼)** arrows to adjust the value.

Main Menu Setting

1. Long press the **SET** button for 3 seconds to enter the main menu settings.
2. Continue pressing **SET** to cycle through modes P0 to P8.
3. Use the **Up (▲)** and **Down (▼)** arrows to adjust the value for the selected mode.
4. To confirm and exit, long press **SET** for 3 seconds, or wait 8 seconds for automatic confirmation.

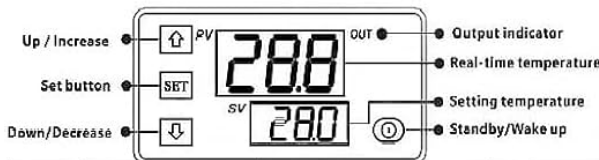
Power Switch

- Long press the **Restart** button for 1.5 seconds to turn off the display and relay.
- Press the **Restart** button again for 1.5 seconds to turn on the display.



W3230 Temperature controller instruction manual

Temperature control range: $-55^{\circ}\text{C}\sim 120^{\circ}\text{C}$
 Temperature control accuracy: 0.1°C
 Display color: red + blue
 Working power supply: DC12V DC 24V AC110V \sim 220V
 Sensor: NTC 10K 1 meter (with probe)
 Product Size: 79.2mm \times 41.9mm \times 26.3mm
 Hole Size: 72.1mm \times 39.2mm
 product weight: 52g (12V/24V), 59g (110V \sim 220V)
 Operation and display panel



Code	Function	Set range	Default
P0	Heat/Cool	H/C	C
P1	Backlash	$0.1^{\circ}\text{C}\sim 30^{\circ}\text{C}$	0.1°C
P2	Set upper limit	$-55^{\circ}\text{C}\sim 120^{\circ}\text{C}$	120°C
P3	Set lower limit	$-55^{\circ}\text{C}\sim 120^{\circ}\text{C}$	120°C
P4	Calibration	$-10^{\circ}\text{C}\sim 10^{\circ}\text{C}$	0°C
P5	Delayed start	0-10min	0
P6	Alarm temperature	$-55^{\circ}\text{C}\sim 120^{\circ}\text{C}$	120°C
P7	Data lock	ON/OFF	OFF
P8	Factory reset	ON/OFF	OFF

Warning code

Code	Reason for error	Solution
	Temperature exceeds alarm temperature	The temperature drops below the alarm temperature and returns to normal.
LLL	No temperature sensor detected	Replacement reconnect temperature sensor

Operation guide

1. Short press "SET" small digital tube to flash, press " Δ " or " ∇ " to set the target temperature, press "Standby" button or no operation to save the setting within 3 seconds.
2. Press and hold "SET" to enter the code setting mode, press " Δ " or " ∇ " to switch the code. After selecting, press "SET" to enter the code setting. After setting, press "Standby" button or no operation to save the setting within 3 seconds. .
3. The last parameter setting is saved by default after shutdown.
4. restore the factory settings: press and hold "SET" to power on.
5. When the module is powered on, it will start directly. After power-on, press and hold the "standby" button, the module will enter "sleep" or "wake up"; in case of power failure, the module will run automatically after power recovery, no need to start manually.

****The working power supply voltage must be connected according to the standard voltage of the label, otherwise the module will be damaged easily.**

Figure 3: W3230 Instruction Manual excerpt, detailing operation guide and warning codes. This image provides a visual reference for the display and button functions.

MAINTENANCE

To ensure the longevity and optimal performance of your Coliao W3230 Temperature Controller, regular maintenance is recommended. Keep the device clean and free from dust and moisture. Avoid exposing the unit to extreme temperatures

or harsh chemicals. Periodically check the wiring connections to ensure they are secure.

The NTC10K waterproof sensor is designed for durability, but avoid sharp bends or excessive pulling on the wire. If the sensor or wire appears damaged, it should be replaced to maintain accurate temperature readings.

TROUBLESHOOTING

This section provides guidance for common issues indicated by the controller's display.

Warning Code	Reason for Error	Solution
HHH	Temperature exceeds alarm temperature or maximum measuring range.	Ensure the measured temperature is within the operating range (-50°C to 120°C). If the temperature is too high, allow it to drop below the alarm threshold. The relay will be forcibly disconnected.
LLL	No temperature sensor detected or sensor open circuit.	Check the sensor connection. If the connection is secure, the sensor may be faulty and requires replacement.
----	Setting of high-temperature alarm exceeds the maximum value.	Adjust the high-temperature alarm setting to be within the permissible range of the device.

If the module does not respond after a power outage, it should automatically resume operation after power recovery. If issues persist, verify all connections and power supply.

SPECIFICATIONS

The following table outlines the technical specifications of the Coliao W3230 Digital Temperature Controller.

Specification	Value
Brand	Coliao
Model Number	W3230
Power Supply	DC 12V / DC 24V / AC 110V~220V
Temperature Control Range	-50°C~120°C
Resolution Ratio	0.1°C (-9.9-99.9); 1°C (other range)
Temperature Control Accuracy	0.1°C
Measurement Accuracy	±0.1°C
Return Precision	0.1°C
Sensor	NTC10K waterproof sensor; Wire: 1 meter
Output	Relay Contact Capacity 10A 220V / 20A 12V / 20A 24V
Environmental Requirements	-10-60°C, humidity 20%-85%RH
LED Displaying Color	Red (PV) / Blue (SV)
Dimensions (approx.)	78mm x 42mm x 21mm (3.07in x 1.65in x 0.82in)
Item Weight	2.89 ounces
UPC	687117711496

PRODUCT SIZE



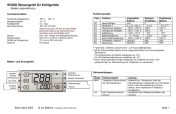


Figure 4: Dimensions of the W3230 Digital Temperature Controller, showing length, width, and height measurements.

WARRANTY AND SUPPORT

Specific warranty information for the Coliao W3230 Digital Temperature Controller is not provided in this manual. For warranty details, technical support, or further assistance, please contact the seller or manufacturer directly through the platform where the product was purchased.

Always refer to the official product listing or packaging for the most up-to-date support information.

	<p>Icstation DC 12V Programmable Temperature Controller - Specifications & Instructions</p> <p>Detailed specifications, operating instructions, and wiring diagrams for the Icstation DC 12V Programmable Temperature Controller. Features a waterproof NTC sensor, 3-digit LED display, and relay control for DIY, smart home, and industrial applications.</p>
	<p>Microcomputer Temperature Controller User Manual and Specifications</p> <p>Detailed specifications, function descriptions, operating instructions, and wiring diagrams for the Microcomputer Temperature Controller. Covers temperature control ranges, accuracy, power supply options, and parameter settings for refrigeration and heating modes.</p>
	<p>W3230 Refrigeration Control Unit User Manual</p> <p>User manual for the W3230 refrigeration control unit, detailing technical specifications, operating instructions, function codes, and error messages. Learn how to optimize temperature control for various refrigeration units, including those used in RVs and boats.</p>